Serial No.: 10/018,662

In the claims:

IN THE CLAIMS:

Claim 1 (cancelled).

Claim 2 (cancelled).

Claim 3 (cancelled).

Claim 4 (cancelled).

Claim 5 (cancelled).

Claim 6 (cancelled).

Claim 7 (cancelled).

Claim 8 (cancelled).

Claim 9 (cancelled).

Claim 10 (cancelled).

Claim 11 (cancelled).

Claim 12 (cancelled).

Claim 13 (cancelled).

Claim 14 (cancelled).

Claim 15 (cancelled).

Claim 16 (cancelled).

Claim 17 (cancelled).

18. (Currently amended) A high ~~High~~ efficiency photovoltaic converter device for high luminous intensities manufactured using optoelectronic technology ~~characterized because~~ comprising a) ~~its~~ semiconductor layers ~~are~~ made of III-V compounds, b) ~~it works at~~ means for providing luminous power densities greater than 1 W/cm^2, and c) ~~its~~ a size is in the range of 0.1 to 100 square millimeters, ~~d)~~ wherein ~~as a result of its reduced size photolithography is used for~~ the definition of numerous said photovoltaic converters on a same semiconductor wafer is provided by photolithography, as well as for the shape of a frontal grid on each of the photovoltaic converters, and ~~finally, e)~~ the separation of the converters on the same semiconductor wafer is carried out by sawing or by cutting with a point or cleaving or by other cutting techniques.

19. (Currently amended) A high ~~High~~ efficiency photovoltaic converter device for high luminous intensities manufactured using optoelectronic technology according to claim 18

~~characterized because~~ wherein a substrate over which the photovoltaic converter is grown is one of a III-V semiconductor, another semiconductor as germanium or silicon, or a non-semiconductor substrate as ceramic or glass.

20. (Currently amended) A high ~~High~~ efficiency photovoltaic converter device for high luminous intensities manufactured using optoelectronic technology according to claim 18 ~~characterized because~~ wherein it transforms a cone of incident light with a given spectrum and coming from a medium with any refraction index into electrical energy.

21. (Currently amended) A high ~~High~~ efficiency photovoltaic converter device for high luminous intensities manufactured using optoelectronic technology according to claim 18 ~~characterized~~ configured for its use in photovoltaic solar energy applications, for which a particular spectrum comes from the sun and in which the device is assembled to an optical concentrator which increases the luminous intensity coming from the sun.

22. (Currently amended) A high ~~High~~ efficiency photovoltaic converter device for high luminous intensities manufactured using optoelectronic technology according to claim 18 ~~characterized because~~ wherein the photovoltaic converter device is assembled to an optical concentrator by means of silicone rubber, epoxy, resins or other paste, glue or primer.

23. (Currently amended) A high ~~High~~ efficiency photovoltaic converter device for high luminous intensities manufactured using optoelectronic technology according to claim 18 ~~characterized~~ for producing electrical energy from heat sources and whose particular spectrum is, mainly, infrared.

24. (Cancelled)

25. (Currently amended) A high ~~High~~ efficiency photovoltaic converter device for high luminous intensities manufactured using optoelectronic technology according to claim 18 ~~characterized by~~ adapted for carrying out conversion of light channeled by optical fiber and coming from a laser into electricity for high-risk environments ~~like for example the powering of sensors and electronics in applications such as mines, high tension grids, the chemical and petrochemical industries, nuclear power plants, airplanes, rockets, satellites and biomedicine~~.

26. (Currently amended) A high ~~High~~ efficiency photovoltaic converter device for high luminous intensities manufactured using optoelectronic technology according to claim 18

~~characterized because its encapsulation is carried out~~ which has been encapsulated by means of optoelectronic techniques ~~like for example: a) fixing the converter device (or die attach) by its rear contact to a support using epoxy or solder, and b) connection of the front metal grid by means of wire bonding, pick and place, flip chip, multichip module or similar connection techniques~~.

27. (Currently amended) High efficiency photovoltaic converter device for high luminous intensities manufactured using optoelectronic technology according to claim 18 ~~characterized because~~ wherein the device consists of a single semiconductor junction.

28. (Currently amended) A high ~~High~~ efficiency photovoltaic converter device for high luminous intensities manufactured using optoelectronic technology according to claim 18 ~~characterized because~~ wherein the device consists of several semiconductor junctions.

29. (Currently amended) A high ~~High~~ efficiency photovoltaic converter device for high luminous intensities manufactured using optoelectronic technology according to claim 18 ~~characterized for~~ possessing a monolithic connection in series in order to increase the output voltage.

30. (Cancelled)

31. (Cancelled)

32. (Cancelled)

33. (Cancelled)

34. (Currently amended) A high ~~High~~ efficiency photovoltaic converter device for high luminous intensities manufactured using optoelectronic technology according to claim 18 ~~characterized because~~ wherein the design of its configuration: semiconductor structure of III-V compounds, ohmic contacts, geometry, metal grid and antireflection layers is calculated by means of multivariable optimization following the maximum efficiency criterion.